Title (en)

Method of determining the amount of particulate accumulated in a particulate filter

Title (de)

Verfahren zur Bestimmung der in einem Filter angesammelten Partikelmenge

Title (fr)

Méthode pour déterminer la quantité des particules accumulées dans un filtre à particules

Publication

EP 1333165 A1 20030806 (EN)

Application

EP 03001562 A 20030123

Priority

IT TO20020072 A 20020125

Abstract (en)

There is described a method of determining the amount of particulate accumulated in a particulate filter (9), based on determining possible variations in the spatial distribution and/or physical-chemical properties of the particulate as a function of engine operating conditions and past particulate accumulation in the particulate filter. More specifically, to begin with, there are determined and memorized in map form a number of reference values (beta MAP) of a parameter (beta) defining a relationship between the amount of particulate (mS) accumulated in the particulate filter (9) and the pressure drop (DELTA PDPF) across the particulate filter (9), each of the reference values (beta MAP) relating to a respective steady engine operating condition in which particulate is accumulated in the particulate filter (9). In a given engine operating condition, an operating value (beta MOD) of the parameter (beta) is then determined as a function of the reference value (beta MAP) of the parameter (beta) relative to the same steady engine operating condition, and of past particulate accumulation in the particulate filter (9). And the operating value (beta MOD) of the parameter (beta) is used to calculate the amount of particulate (mS) accumulated in the particulate filter (9). A final corrected value mS_CORR of particulate accumulated in the filter, calculated taking into account the effects of partial regenerations (e.g. NOx-based spontaneous regeneration) and prolonged vehicle disuse ("parking" effect), is used to activate regeneration of the filter. <IMAGE>

IPC 1-7

F01N 9/00; G01N 15/02; F01N 11/00

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

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